



MEASURE TECHNO LAB

2, B.T. ROAD (JAYANTI CINEMA COMPLEX), BARRACKPORE,
KOLKATA - 700120, W.B.



Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974,
LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in

CALIBRATION CERTIFICATE OF MICRO PIPETTE

CC - 2545

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R01 / 04 - 23

ULR - CC254523000008901F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	JGMCH / ICTC / MP - 01
	c) Sl. No.:	16204426	d) Make:	Microliit
	e) Model / Type:	N.S.	f) Range:	20 µl to 200 µl
	g) Sensor:	N.A.	h) Resolution:	1 µl
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item :	03-04-23	1.4 Physical Condition of DUC :	OK
1.5 Date of calibration :	04-04-23	1.6 Recommended date of next calibration :	04-04-24
1.7 Date of Issue :	06-04-23		

1.8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1006.4 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2002)

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
b) The following standards / Equipment have been used.
- i) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 22 (MTL, Barrackpore) (Cal. Date: 16/09/22, Due Date: 16/09/23)
 - ii) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	20	19.1025	19.1789	-0.8211	0.39
2.	20 µl to 200 µl	100	98.6186	99.0131	-0.9869	
3.		200	197.9774	198.7693	-1.2307	

- Remarks: i) Cubical Expansion co - efficient of pipette material taken as $10^{-5} \mu\text{l} / ^\circ\text{k}$.
ii) This result has an expanded uncertainty with a coverage factor $k=2$ at approximately 95% confidence level.
iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable

Opinions and Interpretations	
Calibrated	√ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by
Measure Techno Lab
Kolkata
Calibration Engineer

Checked / Approved by:

Quality & Technical Manager
S. Pandey



MEASURE TECHNO LAB

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LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in

CALIBRATION CERTIFICATE OF MICRO PIPETTE

CC - 2545

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R02 / 04 - 23

ULR - CC254523000008902F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	JGMCH / ICTC / MP - 02
	c) Sl. No.:	N.S.	d) Make:	MicroIit
	e) Model / Type:	N.S.	f) Range:	20 µl to 200 µl
	g) Sensor:	N.A.	h) Resolution:	1 µl
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

1.3 Date of receipt of item :	03-04-23	1.4 Physical Condition of DUC :	OK
1.5 Date of calibration :	04-04-23	1.6 Recommended date of next calibration :	04-04-24
1.7 Date of Issue :	06-04-23		

1.8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1006.4 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2002)

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
- b) The following standards / Equipment have been used.

- i) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 22 (MTL, Barrackpore) (Cal. Date: 16/09/22, Due Date: 16/09/23)
- ii) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	20	19.6832	19.7619	-0.2381	0.39
2.	20 µl to 200 µl	100	98.7025	99.0973	-0.9027	
3.		200	198.0405	198.8327	-1.1673	

- Remarks: i) Cubical Expansion co - efficient of pipette material taken as $10^{-5} \mu\text{l} / ^\circ\text{k}$.
- ii) This result has an expanded uncertainty with a coverage factor $k=2$ at approximately 95% confidence level.
 - iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable

Opinions and Interpretations	
Calibrated	✓
Limited Use	

Calibration Engineer
Measure Techno Lab
K. Barata
Calibration Engineer

Checked / Approved by:
KOLKATA
Quality & Technical Manager
S. Pandey



MEASURE TECHNO LAB

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CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R03 / 04 - 23

ULR - CC254523000008903F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	JGMCH / ICTC / MP - 03
	c) Sl. No.:	17100085	d) Make:	Microlit
	e) Model / Type:	N.S.	f) Range:	100 µl to 1000 µl
	g) Sensor:	N.A.	h) Resolution:	10 µl
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item : 03-04-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 04-04-23

1.6 Recommended date of next calibration : 04-04-24

1.7 Date of Issue : 06-04-23

1.8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1006.4 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2002)

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
b) The following standards / Equipment have been used.

- i) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 22 (MTL, Barrackpore) (Cal. Date: 16/09/22, Due Date: 16/09/23)
ii) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	100	96.1525	96.5371	-3.4629	0.39
2.	100 µl to 1000	500	493.4394	495.4132	-4.5868	
3.	µl	1000	990.3440	994.3054	-5.6946	

- Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10^{-5} µl / °k.
ii) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration

N.S. - Not Specified

N.A. - Not Applicable

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibrated by
K. Barua
Calibration Engineer

Checked / Approved by

Quality & Technical Manager

S. Pande



MEASURE TECHNO LAB

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CALIBRATION CERTIFICATE OF REFRIGERATOR

CC - 2545

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R04 / 04 - 23

ULR - CC254523000008904F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Refrigerator	b) Code No.:	JGMCH / ICTC / REF - 01
	c) SI No.:	N.A.	d) Make:	Electrolux
	e) Model / Type:	EDP234	f) Range:	As Per Report
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item : 04-04-23 1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 04-04-23 1.6 Recommended date of next calibration: 04-04-24

1.7 Date of Issue : 06-04-23

1.8 Environmental Conditions During Calibration: Temperature: 25.3 °C
Humidity: 65.6 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

- i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2022 - 1498 (JRPM, Chennai) (Cal. Date: 25/08/22, Due Date: 24/08/23)
- ii) RTD (PT - 100) Cal. Certificate No. TL / 022 / 1166.2.1 (TEMPSENS, Udaipur) (Cal. Date: 19/10/22, Due Date: 18/10/23)

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Chamber	Corrected Std. Value °C			Zone	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average		
1.			3.24	3.29	3.266	UZ	1.06
			3.36	3.41	3.393	MZ	1.06
			3.49	3.55	3.529	LZ	1.06
2.	Temperature	Normal	4.45	4.52	4.491	UZ	1.06
			4.53	4.61	4.577	MZ	1.06
			4.62	4.67	4.653	LZ	1.06
3.			5.63	5.69	5.671	UZ	1.06
			5.74	5.79	5.777	MZ	1.06
			5.81	5.85	5.838	LZ	1.06

- Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Average Reading obtained by 10 Readings.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
 Max. - Maximum UZ - Upper Zone MZ - Middle Zone LZ - Lower Zone

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibration Engineer
 Measure Techno Lab
 Kolkata
 Calibration Engineer

Checked & Approved by:
 Quality & Technical Manager



MEASURE TECHNO LAB

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CALIBRATION CERTIFICATE OF REFRIGERATOR

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R05 / 04 - 23

ULR - CC254523000008905F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Refrigerator	b) Code No.:	JGMCH / ICTC / REF - 02
	c) SI No.:	N.A.	d) Make:	LG
	e) Model / Type:	gl - b221ahaw	f) Range:	As Per Report
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item : 04-04-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 04-04-23

1.6 Recommended date of next calibration: 04-04-24

1.7 Date of Issue : 06-04-23

1.8 Environmental Conditions During Calibration: Temperature: 25.4 °C
Humidity: 65.5 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

- i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2022 - 1498 (JRPM, Chennai) (Cal. Date: 25/08/22, Due Date: 24/08/23)
- ii) RTD (PT - 100) Cal. Certificate No. TL / 022 / 1166.2.1 (TEMPSENS, Udaipur) (Cal. Date: 19/10/22, Due Date: 18/10/23)

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Chamber	Corrected Std. Value °C			Zone	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average		
1.			2.12	2.36	2.241	UZ	1.06
			2.16	2.21	2.193	MZ	1.06
			2.19	2.24	2.224	LZ	1.06
2.	Temperature	Normal	3.22	3.29	3.261	UZ	1.06
			3.24	3.36	3.307	MZ	1.06
			3.29	3.41	3.358	LZ	1.06
3.			4.34	4.42	4.391	UZ	1.06
			4.39	4.50	4.457	MZ	1.06
			4.43	4.52	4.483	LZ	1.06

Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Average Reading obtained by 10 Readings.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
 Max. - Maximum UZ - Upper Zone MZ - Middle Zone LZ - Lower Zone

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibration Engineer
 Calibrated by:
 Measure Techno Lab
 Kolkata
 J. Dey
 Calibration Engineer

Checked / Approved by:

 Quality & Technical Manager



MEASURE TECHNO LAB

2, B.T. ROAD (JAYANTI CINEMA COMPLEX), BARRACKPORE,
KOLKATA - 700120, W.B.



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LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in

CALIBRATION CERTIFICATE OF REFRIGERATOR

CC - 2545

CALIBRATION CERTIFICATE NO.: MTL / JGMCH / R06 / 04 - 23

ULR - CC254523000008906F

Page: 1 of 1

1.0 Service Request No.: MTL / 04C / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,
ICTC Unit,
Jhargram Govt. Medical College & Hospital,
Jhargram.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Refrigerator	b) Code No.:	JGMCH / ICTC / REF - 03
	c) SI No.:	N.A.	d) Make:	Haier
	e) Model / Type:	N.S.	f) Range:	As Per Report
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item : 04-04-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 04-04-23

1.6 Recommended date of next calibration: 04-04-24

1.7 Date of Issue : 06-04-23

1.8 Environmental Conditions During Calibration: Temperature: 25.7 °C
Humidity: 65.6 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

- i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2022 - 1498 (JRPM, Chennai) (Cal. Date: 25/08/22, Due Date: 24/08/23)
- ii) RTD (PT - 100) Cal. Certificate No. TL / 022 / 1166.2.1 (TEMPSENS, Udaipur) (Cal. Date: 19/10/22, Due Date: 18/10/23)

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Chamber	Corrected Std. Value °C			Rack	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average		
1.			3.21	3.34	3.276	1	1.06
			3.26	3.39	3.333	2	1.06
2.	Temperature	Normal	4.29	4.41	4.356	1	1.06
			4.32	4.46	4.397	2	1.06
3.			5.39	5.46	5.436	1	1.06
			5.42	5.53	5.483	2	1.06

- Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
iii) Average Reading obtained by 10 Readings.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
Max. - Maximum

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibration Engineer
Measure Techno Lab
K. J. Datta
Calibration Engineer

Checked / Approved By:
Quality & Technical Manager